(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property **Organization**

International Bureau



(43) International Publication Date 16 June 2005 (16.06.2005)

PCT

(10) International Publication Number WO 2005/055541 A1

(51) International Patent Classification⁷:

H04L 27/00

(21) International Application Number:

PCT/IB2004/052524

(22) International Filing Date:

24 November 2004 (24.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

03104545.3

4 December 2003 (04.12.2003)

- (71) Applicant (for all designated States except DE, US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (71) Applicant (for DE only): PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH [DE/DE]; Steindamm 94, 20099 Hamburg (DE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): LAMPE, Alexander [DE/DE]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). DIETSCH, Rainer [DE/DE]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

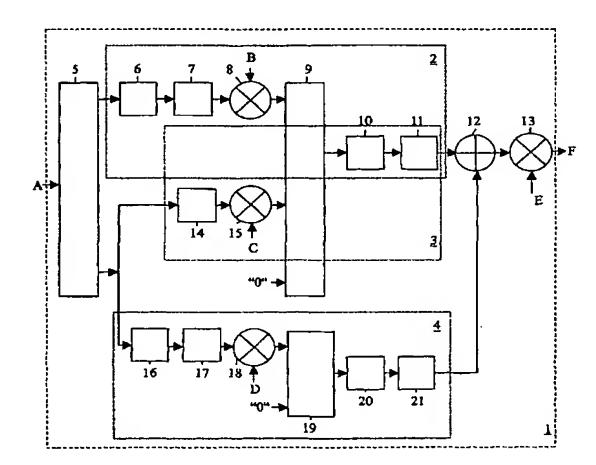
- (74) Agents: ELEVELD, Koop, J. et al.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

[Continued on next page]

(54) Title: AVOIDANCE OF DISCONTINUITIES WHEN SWITCHING BETWEEN MODULATION SCHEMES



(57) Abstract: Modulator system (1) comprising modulators (2, 3, 4) for modulating input signals (A) according to different modulation schemes (8PSK, GMSK) cause discontinuities in the output signals (F) when switching between the schemes. By providing the modulator systems (1) with compensators (13, 22-26) for compensating amplitudes/phases of the output signals (F) of the modulator system (1) for discontinuities, these discontinuities resulting from modulation scheme changes are reduced to a large extent. This may be done before/after the pulse shapers (11, 21). The compensators (13, 22-26) comprise multipliers for multiplying pulse shaped modulated signals with complex valued waveforms (E), or for multiplying modulated signals with waveforms (S, T), or for multiplying complex valued signals (B, C, D) with complex valued phase offsets (X, Y, Z), which complex valued signals (B, C, D) are to be multiplied with mapped input signals. As a result, the output signals (F) and/or power amplifiers (33) situated after the modulator system (1) no longer need to be ramped down.

WO 2005/055541 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.